

IMPLEMENTATION OF COLLABORATIVE INTENSIVE TRAINING ON MICROSOFT WORD SKILLS FOR STUDENTS IN THE MOTORCYCLE ENGINEERING DEPARTMENT AT SMK TELKOM

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Abstract

This study aims to improve the Microsoft Word competence of students in the Motorcycle Engineering program at SMK Telkom through intensive, collaborative-based training. This study employed a qualitative approach in the form of action research. Initial observations showed that out of 20 students, only 3 (15%) were able to operate Microsoft Word effectively, while 17 (85%) experienced difficulties with basic functions such as typing, formatting text, and using shortcuts. The method used was a one-day intensive training session totaling 3 effective hours with a group-based learning approach. Students were divided into 4 heterogeneous groups of 5, allowing more proficient students to assist their peers through peer teaching. Each group was provided with a guided worksheet as a learning reference, and the training material covered basic typing skills, text formatting, and Microsoft Word shortcuts. The results showed significant improvement: the ability to open and save documents rose from 15% to 100%, keyboard shortcut usage from 0% to 80%, and the ability to create simple tables from 10% to 70%. This study concludes that intensive, collaborative-based training is effective in improving the digital literacy competencies of vocational high school students, particularly in their mastery of Microsoft Word, which is essential for preparing them for the workforce.

Keywords: Microsoft Word, Training, Digital Literacy, Vocational High School, Collaborative Learning

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1. Introduction

The development of information and communication technology in the digital age requires every individual, including vocational high school (SMK) students, to possess adequate digital literacy skills. Digital literacy is not merely the ability to operate technological devices, but also the ability to use them effectively and productively in various contexts of life [1]. Microsoft Word, as one of the most widely used word processing applications in the workplace, is a fundamental skill that vocational high school students must master to prepare them for entry into the industrial world [2]. Companies expect vocational high school graduates to already possess basic proficiency in using this application so that they can be immediately productive without requiring additional training that is both time-consuming and costly [3].

Field data indicate a gap between the competencies of vocational high school students and the needs of the workforce. Rifai and Khoeron state that the level of digital literacy among vocational high school students still needs to be improved, particularly regarding the use of

productivity applications such as Microsoft Word [4]. Fathoni et al. add that although vocational high school students' awareness of the need for digital literacy is quite high, their practical mastery of these skills remains inadequate [5]. This situation was also observed at Telkom Vocational High School, particularly among students in the Motorcycle Engineering program. Based on initial observations, out of 20 students observed, only 3 students (15%) were able to operate Microsoft Word proficiently, while 17 students (85%) struggled even with basic functions such as typing, formatting text, and using simple features.

Various studies have demonstrated the effectiveness of structured training in improving vocational high school students' Microsoft Word proficiency. Samosir et al. showed that structured Microsoft Office training can significantly improve vocational high school students' proficiency [6]. Utami et al. also found an increase in average Microsoft Word proficiency from 29 to 42 after students participated in training at SMK Mega Bangsa [7]. In terms of methodology, collaborative learning in small groups has been shown to not only improve technical competencies but also develop soft skills such as communication and teamwork [8]. Setiawan et al. reinforce this by showing that collaborative learning has a significant impact on vocational high school students' problem-solving skills [9], while Ningtyas et al. found that this approach can simultaneously improve students' social skills and academic achievement [10].

Based on these findings, this study aims to: (1) identify students' initial proficiency in using Microsoft Word; (2) conduct intensive Microsoft Word training using a collaborative learning method; and (3) analyze improvements in students' competencies after completing the training. The results of this study are expected to serve as a reference for effective digital literacy training programs for vocational high school students.

1.1 Digital Literacy in Vocational Education

Digital literacy is an individual's ability to use information and communication technology effectively, critically, and responsibly to support learning and work activities. In the vocational education setting, digital literacy is a key competency because the industrial sector increasingly relies on technology across various work processes. Vocational high school (SMK) students are not only expected to master technical skills in their respective fields but must also be able to use software that supports administrative tasks and work documentation.

The advancement of digital transformation has reshaped workforce competency requirements across various industrial sectors. SMK graduates are expected to adapt to work environments that utilize digital technology for data management, report preparation, professional communication, and document archiving. Therefore, strengthening digital literacy must be integrated into the learning process so that graduates are better prepared for the workforce and able to compete in an increasingly competitive industrial landscape.

1.2 Microsoft Word as a Core Workplace Competency

Microsoft Word is one of the most widely used word processing applications in office administration and other professional activities. This application is used to create reports, official letters, proposals, technical documents, and various forms of written communication that require systematic and professional formatting. Proficiency in Microsoft Word extends beyond basic typing skills to include the ability to format documents, create tables, manage page layouts, and utilize features that enhance work efficiency.

In the context of vocational education, proficiency in Microsoft Word is highly relevant because nearly every field of work requires the ability to create digital documents. For students majoring in Motorcycle Technology, these skills can be used to create vehicle maintenance reports, document work results, prepare industrial internship reports, and handle the administrative tasks of a repair shop. Therefore, Microsoft Word training can serve as an important means of strengthening supporting competencies to prepare students for the workforce.

1.3 Collaborative Learning in Competency Development

Collaborative learning is an educational approach that positions students as active participants in the learning process through group work. In this approach, students exchange information, engage in discussions, and help one another to achieve predetermined learning objectives. The interactions that occur during the collaborative process enable students to gain a better understanding because they learn not only from the instructor but also from their peers.

The application of collaborative learning in digital skills training offers several advantages. In addition to enhancing understanding of the material, this approach can also develop communication skills, teamwork, and problem-solving abilities. Students with stronger skills can assist group members who are still struggling, thereby creating a more inclusive learning process. Thus, collaborative learning is a relevant strategy for enhancing information technology competencies in vocational high school settings.

1.4 Previous Research

Numerous studies on Microsoft Office training have been conducted to improve the digital competencies of vocational high school students. Samosir et al. reported that Microsoft Office training provided to vocational high school students was able to improve their proficiency in using office applications and boost their confidence in completing computer-based tasks. These findings indicate that structured training can be an effective strategy for addressing students' limited digital skills.

Another study conducted by Utami et al. demonstrated an improvement in students' proficiency with Microsoft Word after they participated in a systematically designed training program. The results of this study showed that providing hands-on practice plays a crucial role in accelerating the mastery of digital document processing skills.

Meanwhile, studies by Rofiudin et al., Setiawan et al., and Ningtyas et al. emphasize the importance of a collaborative learning approach in improving the quality of learning. This approach not only enhances academic competence but also contributes to the development of social skills, communication abilities, and cooperation among students. This study differs from previous research in that it employs intensive Microsoft Word training using a collaborative approach for students majoring in Motorcycle Engineering who have a relatively low initial level of proficiency.

2. Research Methodology

2.1 Type of Research

This study employs a qualitative approach in the form of action research. Action research was chosen because it aligns with the study's objectives, namely to improve teaching practices and enhance students' competencies through direct intervention in the form of training.

2.2 Research Subjects

The research subjects were 20 students majoring in Motorcycle Engineering at SMK Telkom. The selection of subjects was based on the results of preliminary observations, which indicated that the students had limited proficiency in using Microsoft Word.

2.3 Research Location and Time

The research was conducted in the computer lab at SMK Telkom. The training took place over one intensive day, with a total of 3 hours of effective learning time.

2.4 Research Instruments

The instruments used in this study include: (1) an observation sheet to assess students' initial skills; (2) a training guide module containing Microsoft Word materials and practical

steps; (3) practice worksheets for students to complete during the training; and (4) documentation in the form of photographs of activities and students' work.

2.5 Research Procedure

The research was conducted through four interconnected stages. First, the initial observation stage to identify students' baseline abilities. Second, the training preparation stage, during which the researcher developed training materials focused on basic skills (typing, text formatting, and keyboard shortcuts), structured worksheets, and divided the 20 students into 4 groups of 5 students each. Third, the training implementation stage, with the following schedule: an opening session (30 minutes), a basic learning session (1 hour), a keyboard shortcut session (1 hour), and a group practice session (30 minutes). Fourth, the evaluation stage, which involved direct observation, assessment of students' work on the worksheets, and documentation of students' progress.

2.6 Data Analysis Techniques

The collected data were analyzed using qualitative descriptive methods by comparing conditions before and after the training. The analysis focused on changes in students' ability to use Microsoft Word, their responses and enthusiasm during the training, and their ability to complete the worksheet assignments.

3. Results and Discussion

3.1 Results of the Initial Observation

The initial observation conducted on 20 students majoring in Motorcycle Engineering revealed a concerning situation regarding their proficiency in using Microsoft Word, as shown in Table 1.

Table 1. Students' Initial Proficiency in Using Microsoft Word

Skill Category	Number of Students	Percentage
Able to use Microsoft Word proficiently	3 students	15%
Unable to use Microsoft Word or experiencing difficulties	17 students	85%
Total	20 students	100%

No	Type of Difficulty
1	Does not understand how to open a Microsoft Word document
2	Does not understand how to save a document
3	Difficulty in formatting text (font, font size, alignment)
4	Not familiar with using keyboard shortcuts
5	Difficulty in creating and formatting tables
6	Does not know how to adjust page margins
7	Does not know how to adjust the page layout

Of the 20 students surveyed, only 3 (15%) were able to use Microsoft Word effectively. Meanwhile, 17 students (85%) still experienced various difficulties in using Microsoft Word. The most common difficulties included an inability to open and save documents, format text,

use keyboard shortcuts, create tables, and set margins and page layout. These results indicate that the majority of students still require guidance and basic training in using Microsoft Word.



Figure 1. Conditions in the Classroom During the Initial Observation

3.2 Training Implementation

3.2.1 Grouping and Distribution of Materials

Students were divided into 4 heterogeneous groups, each consisting of 5 students with varying skill levels. The three students who were already proficient in using Microsoft Word were assigned to different groups so they could assist their peers (peer teaching). Each group was provided with a set of guided worksheets containing practical steps, a computer with Microsoft Word pre-installed, and the competency targets to be achieved by the end of the training.

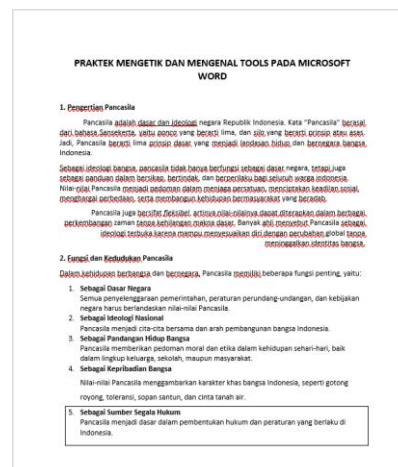


Figure 2. Training Guide Worksheet

3.2.2 Training Process

The training began with a basic introduction to the Microsoft Word interface using a live demonstration via a projector. During the basic skills session, students were taught proper hand positioning on the keyboard, the 10-finger typing technique, and how to type simple documents using standard formatting. The students appeared very enthusiastic, as many of them had never received formal typing training before.

In the keyboard shortcut session, students practiced the 13 most frequently used basic shortcuts, as shown in Table 2. The method used was “learning by doing,” in which students immediately practiced each shortcut repeatedly while working on practice documents until they became familiar with them.

Table 2. Basic Microsoft Word Keyboard Shortcuts

No Shortcut	Function
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No	Shortcut	Function
1	Ctrl + C	Copy text
2	Ctrl + V	Paste text
3	Ctrl + X	Cut text
4	Ctrl + Z	Undo the last command
5	Ctrl + Y	Redo the command
6	Ctrl + B	Make text bold (Bold)
7	Ctrl + I	Make text italic (Italic)
8	Ctrl + U	Underline text (Underline)
9	Ctrl + S	Save the document (Save)
10	Ctrl + P	Print the document (Print)
11	Ctrl + A	Select all text (Select All)
12	Ctrl + F	Search for a word or text (Find)
13	Ctrl + H	Replace text (Replace)

3.2.3 Collaborative Learning in Groups

Within each group, positive interactions take place in which more proficient students help peers who are struggling, group members exchange information on how to quickly complete tasks, and active discussions occur when new features are discovered. In line with the theory proposed by Rofiudin et al., learning in small groups with a clear structure can enhance not only technical competencies but also soft skills such as communication and teamwork [8].



Figure 3. Collaborative Learning Activities in Groups

3.3 Training Results and Discussion

3.3.1 Improvement in Student Competence

After a one-day intensive training session, there was a significant improvement in the students' abilities. Based on an evaluation through direct observation and assessment of their work on the worksheets, the results are presented in Table 3.

Table 3. Comparison of Students' Competencies Before and After the Training

No	Competency Area	Before Training	After Training
1	Opening and Saving Documents	3 students (15%)	20 students (100%)
2	Typing with Basic Formatting	3 students (15%)	18 students (90%)

No	Competency Area	Before Training	After Training
3	Using Keyboard Shortcuts	0 students (0%)	16 students (80%)
4	Setting Layout and Margins	1 student (5%)	15 students (75%)
5	Creating Simple Tables	2 students (10%)	14 students (70%)

These findings are consistent with the research by Utami et al. [7] and Samosir et al. [6], which demonstrated that structured training can significantly improve Microsoft Word proficiency in a relatively short period of time.

3.3.2 Analysis of Competency Improvement Based on Skill Aspects

The improvement in competency observed after the training indicates that the training methods used had a positive impact on the students' ability to use Microsoft Word. All measured aspects showed improvement compared to the baseline conditions before the training began. The aspect of opening and saving documents showed the greatest improvement, as these skills are fundamental and relatively easy to grasp after students received demonstrations and hands-on practice.

Improvements were also evident in typing skills and the use of keyboard shortcuts. Mastery of keyboard shortcuts is a key indicator because it enhances work efficiency when drafting documents. Although not all students have fully mastered the shortcuts taught, the majority of participants were able to apply them while completing the exercises provided during the training.

Some students still struggled with page layout and creating simple tables. This is understandable, as these two skills require a more complex procedural understanding than other basic skills. Nevertheless, the results indicate that the training successfully built a solid foundation of competencies to support further skill development.

Overall, these results indicate that intensive training combined with collaborative learning can lead to improved competencies in a relatively short period of time. Students' active engagement during practical exercises and peer support within their groups were factors that contributed to the success of the learning process.

3.3.2 Factors Contributing to the Success of the Training

The success of this training can be attributed to several key factors. First, a focus on essential basic skills: the training does not attempt to teach all Microsoft Word features at once, but rather focuses on the most frequently used functions in accordance with the principle of step-by-step learning [6]. Second, the use of structured worksheets that serve as a learning roadmap so that students do not feel confused because there is already a clear guide on what to learn [2]. Third, the emphasis on learning by doing: students are given many opportunities for hands-on practice, which has proven to be more effective in learning technical skills than lecture-only methods [3].

3.3.3 The Role of Collaborative Learning

Dividing students into four heterogeneous groups contributed significantly to the success of the training. Peer teaching has proven effective because students tend to be more open to asking questions of their peers than of instructors [9]. Group work also fosters intrinsic motivation and healthy competition, as each member feels responsible for the group's success [11]. Furthermore, collaborative learning develops essential soft skills such as communication, teamwork, and problem-solving, which are highly valued in the workplace [8, 10].

3.3.4 Relevance to the Needs of the Workplace

Proficiency in Microsoft Word is a fundamental skill required in nearly all fields of work. For students majoring in Motorcycle Engineering, this skill is essential for preparing repair and maintenance reports, documenting work, communicating in writing with supervisors or customers, and drafting proposals or service offers. Anwar et al. emphasize that proficiency in Microsoft Office is a key factor in enhancing the job readiness of vocational high school graduates [3]. By participating in this training, students will be better equipped to compete in the job market in line with industry demands.

3.4 Implications of the Study

The results of this study suggest that collaborative digital skills training can serve as an alternative program for developing student competencies in vocational high schools. The improvement in students' ability to use Microsoft Word indicates that training designed to meet participants' needs can have a tangible impact on enhancing digital skills.

From the school's perspective, these findings can serve as a foundation for designing more structured and sustainable information technology training programs. Integrating Microsoft Office training into learning support activities can help students acquire skills relevant to the needs of the workforce.

In addition to providing technical benefits, the collaborative approach implemented during the training also contributes to the development of students' social skills. The ability to cooperate, communicate, and help one another in completing tasks are competencies that are highly sought after in modern work environments. Therefore, the implementation of collaborative learning is worth considering as a learning strategy that can support improvements in the quality of vocational high school graduates.

4. Conclusion

This study concludes that intensive training based on collaborative learning is effective in improving the Microsoft Word proficiency of students majoring in Motorcycle Engineering at SMK Telkom. From the initial condition where only 3 out of 20 students (15%) were able to use Microsoft Word proficiently, after the training all students (100%) successfully mastered the skills of opening and saving documents, 90% were able to type using basic formatting, 80% were able to use keyboard shortcuts, 75% were able to adjust layout and margins, and 70% were able to create simple tables. This success was supported by three main factors: a focus on essential basic skills, the use of structured worksheets as learning guides, and the application of the "learning by doing" method within a collaborative learning framework that encouraged peer teaching and shared motivation.

Based on these results, it is recommended that schools conduct similar training on a regular basis for all majors and integrate Microsoft Office instruction into the curriculum as a required local content course. Providing computer labs with an ideal ratio of 1 student to 1 computer should also be a priority. For future research, it is recommended to use standardized quantitative pre-test and post-test instruments, measure students' long-term retention of skills, and expand the scope of the research to other Microsoft Office applications such as Excel and PowerPoint.

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